

REMARKS/ARGUMENTS

Entry of this response and reconsideration and allowance of the above-identified patent application are respectfully requested. Please note that a supplemental information disclosure statement (IDS) has been filed concurrently with the present response. The Examiner is respectfully requested to consider and initial the cited references. A request for extension of time is submitted herewith.

Claims 1-8, 10, 13-18, 20-24, 26-41, 43-46, 50-59 and 61 are pending. Claims 1, 3, 4, 6, 18, 20, 29, 36-41, 43-46, 50 and 51 have been amended. Claims 5, 7, 8, 10, 13, 26, 52-59 and 61 have been canceled. No claims have been added. No new matter is added. Applicant respectfully submits that, upon entry of the subject amendment, the application will be in condition for allowance. Applicant, thus, respectfully requests consideration of the above amendment and following remarks.

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Claims 20-24, 26-35, 36-46, and 50-57 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 37-41, 43-46 and 50-57 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-2, 4-8, 10, and 13-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable U.S. Patent 6,282,405 to Brown ("Brown1") in view of U.S. Patent 5,949,327 to Brown ("Brown2"). Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1 and Brown2 as applied to claims 1-2,4-8, 10 and 13- 18, and further in view of U.S. Patent 6,577,414 B1 to Feldman et al. ("Feldman"). Claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1 in view of U.S. Patent 7,203,185 to Dhara et al. ("Dhara"). Claims 26, 35, 40 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1 and Dhara as

applied to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 above, and further in view of U.S. Patent 4,433,284 to Perkins ("Perkins") and Brown2. Claim 41 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1 and Dhara as applied to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 above, and further in view of Feldman. Claims 51 and 53 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1 and Dhara as applied to claims 20-24, 27-34, 36-39, 43-45, 50, 52, 54-59 and 61 above, and further in view of U.S. Patent 6,643,566 B1 to Lehr et al. ("Lehr").

Briefly, the present invention forms a part of communications system and, in one embodiment, may include a fiber optic interface device configured to provide communications over a fiber optic network and a power line. In one embodiment the fiber optic interface device may include a modem, a fiber optic transceiver, and a router. In addition, the fiber optic interface device may be communicatively coupled to a transformer bypass device.

Amendments

Independent claims 1, 20 and 36 have been amended to require various components or processes be performed at a location co-located with the distribution transformer. See Figures 3. Claim 20 has been amended to include a "third interface" to communicate the "data signals over a medium voltage power line". Independent claims 1, 20 and 36 have been amended to require routing to one of a plurality of communication devices located in one of a plurality of customer premises. See para. 45. Various other claims have been amended as required by these amendments and/or to correct typographical, clerical, and/or grammatical errors.

112 Rejections

Claims 20-24, 26-35, 36-46, and 50-57 have been rejected under 35 U.S.C. § 112 as failing to comply with the written description requirement. The office action asserts that the claimed subject matter is not supported by adequate written description and in particular, the limitation of "a router in communication with the fiber optic transceiver and

the modem" was not original described in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant respectfully refutes this rejection. Originally filed claims form part of the specification. Originally filed claim 19 claims "routing data." Originally filed claim 25 claims wherein the converter comprises a router. In addition., paragraph 45 states, "Fiber optic interface device 203 also may have certain router functionality" and also states, "fiber optic interface device 203 may identify certain data headers and a forwarding table to determine to which customer premise the data should be transmitted." Thus, as shown in Figure 7, the router may route the data prior to providing the data to modem 702.

Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 USC § 112, first paragraph because the application as filed discloses the router in communication with the fiber optic transceiver and the modem.

Claims 37-41, 43-46 and 50-57 have been rejected under 35 § USC 112, second paragraph, as being indefinite. Applicant has amended claims 37-41, 43-46, and 50-51 to correct the lack of antecedent basis for "the communication network" as recited in the enumerated claims.

In view of the above amendment to claims 37-41, 43-46, and 50-51. Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 USC § 112, second paragraph.

Prior Art Rejections

Independent claim 1

Independent claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1 in view of Brown2. Independent claims 20 and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown1 in view of Dhara. Briefly, the present invention may comprise a device that a fiber optic transceiver and a router and may includes three ports. A first port is for communicating over a medium

voltage power line, a second port is for communicating over a low voltage power line, and a third port is for communicating over a fiber optic data network.

Claim 1 requires communicating a data signal with a transformer bypass device and routing the data. One embodiment of such a device is shown in Figure 3 of the present application. As shown in the figure, and claimed in claim 1, the transformer bypass device is coupled to the medium voltage power line and to the low voltage power line and provides a path for data communications around a distribution transformer that converts the voltage of the medium voltage power line to low voltage. Brown1 does not disclose a transformer bypass device or other device coupled to a medium voltage power line and a low voltage power line as required by claim 1. The examiner asserts that Brown2 discloses a HF by-pass unit in Figure 15. However, it is not clear what portion of Figure 15 is considered by the Examiner to be a transformer bypass unit as claimed. In addition, there is no disclosure of a fiber optic transceiver providing data to any component in Figure 15 of Brown2.

Claim 1 also requires routing the data. The office action however fails to provide any explanation or supporting citation for this claim element and appears to overlook this claim limitation.

Independent claims 1, 20, and 36.

Routing

As amended, all of the independent claims require routing data to one of a plurality of communication devices located in one of a plurality of customer premises. The office action relies on Dhara for such disclosure. However, router 124 shown in Figure 1 of Dhara is connected to the Internet and CMTS 120. There is no disclosure in Dhara of routing data to data to one of a plurality of communication devices located in one of a plurality of customer premises as required by the claims.

Fiber optic transceiver

First, Brown1 does not disclose that the transceivers shown in the figures are fiber optic transceivers as expressly recited in independent claims 20 and 36.

Consequently, that fact alone makes Brown1 deficient for disclosing a fiber optic transceiver as claimed.

The office action asserts that Brown2 “teaches in FIG. 12 transceiver 1202 and modem 1204”. See office action at page 4. The depicted transceiver 1202 is not a fiber optic transceiver. Additionally, the cited figure is not receiving an optical signal at all. In fact, Brown2 does not disclose a fiber optic transceiver and a textual search reveals that Brown2 does not use the word “fiber” or “optic”. Applicant reasserts that Brown1 and Brown2 fail to disclose a fiber optic transceiver as claimed.

In the rejection of independent claims 20 and 36 the examiner suggests that “it is understood that to interface an optical network and an electrical network, it is necessary to convert between optical and electrical signal using a transceiver and a modem for converting signal between baseband and RF using a modem”. See page 6 of the office action. The examiner appears to have taken judicial notice that the only way to “interface an optical network and an electrical network” is only by using a transceiver and a modem. Applicant respectfully refutes this assertion. Specifically, commercially available technology exists to convert between electrical and optical signals without demodulating the data signals. Consequently, it is not necessary to include a transceiver and a modem to convert between an optical network and an electrical network.

If the examiner was taken judicial notice, applicants respectfully request an affidavit or citation to prior art providing such a teaching as required by 37 CFR 1.104(d) (2) and MPEP § 2144.03. As noted by the Federal Circuit deficiencies of the cited references cannot be remedied by the examiner's general “conclusions about what is ‘basic knowledge’ or ‘common sense.’” In re Sang Su Lee, 61 USPQ2d 1430 at 1434-35 (quoting In re Zurko, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001)) (citation omitted).

Components co-located with distribution transformer

Claim 20 has been amended to require the said first interface port, said second interface port, said third interface port, said fiber optic transceiver, said modem, and said router be co-located with the distribution transformer. Claim 36 has been similarly amended. Claim 1 has been amended to require said receiving, said converting, said routing, and said transmitting be performed by components co-located with the distribution transformer.

Applicant submits that the transceiver/modems depicted in the schematics of Figures 2-4 of Brown 1 represent a transceiver or a modem that is located at or near the building (See Figure 1) - not at the distribution transformer. The figures simply illustrate the flow of data from a first transceiver/modem, to a first network conditioning unit 52, over a power line, to a second network conditioning unit 52, and to a second transceiver/modem. For example, in Figure 2 the speech or data may be modulated by a first modem and transmitted to a first network conditioning unit 52A that couples the data signal onto a power line for reception by a second network conditioning unit 52B. The second network conditioning unit 52B may then provide the data signals to a second modem, which may output the speech or data.

Thus, the transceiver or modem disclosed by Brown cannot be construed as the transceiver and modem combination as claimed.

Furthermore, the network conditioning units of Brown1, shown best in Figures 11A and 11B, only include filters for separating out the power from the data communications. In other words, the conditioning units 52 do not include a modem (or modulating) or fiber optic transceiver as required by claims 20 and 36. (See also col. 8, ll. 16-21).

In view of the foregoing, it is respectfully submitted that the claimed invention is patentably distinguished over the asserted prior art references and that the application stands in condition for allowance. It is respectfully requested that the application be reconsidered, that all pending claims be allowed, and that the application be passed to issue.

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PATENT

CONCLUSION

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact Mel Barnes at (410) 757-6643, to discuss any other changes deemed necessary in a telephonic interview.

Authorization is hereby granted to charge any deficiencies in fees, including any fees for extension of time under 37 C.F.R. §1.136(a), to Deposit Account 50-3970. Please credit any overpayment in fees to the same deposit account.

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